

## ABSTRACT

The invention relates to a system for sample fraction collection in chromatography, and more specifically for using an extended vessel assembly that increases the total collectible volume of a liquid sample fraction in a single collection vessel in an automated system for collection, purification, and storage of purified sample fractions. The system uses an extended vessel assembly to provide collection of substantially large volumes of liquid fractions from chromatography system, such as a preparatory scale supercritical fluid chromatography (Prep Scale SFC) or preparatory scale liquid chromatography (Prep Scale LC), into a single collection vessel. The invention improves productivity while reducing the need for sample transfer between vessels and reducing the risk of human error. The collected liquid solvent is removed after purification using one of several types of evaporation devices or techniques, such as evaporation at moderate temperature under a vacuum with liquid agitation. Collection vessels are labeled and grouped into labeled racks for tracking, efficient movement between system modules, and storage.